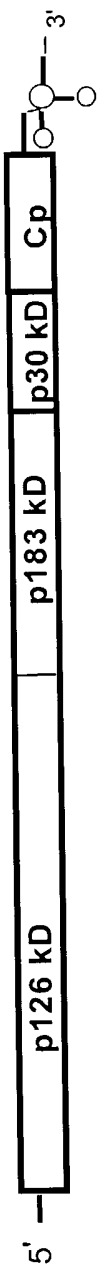


FIG. 1
Tobamovirus Expression Vectors

TMV



TMV-Expression Vector

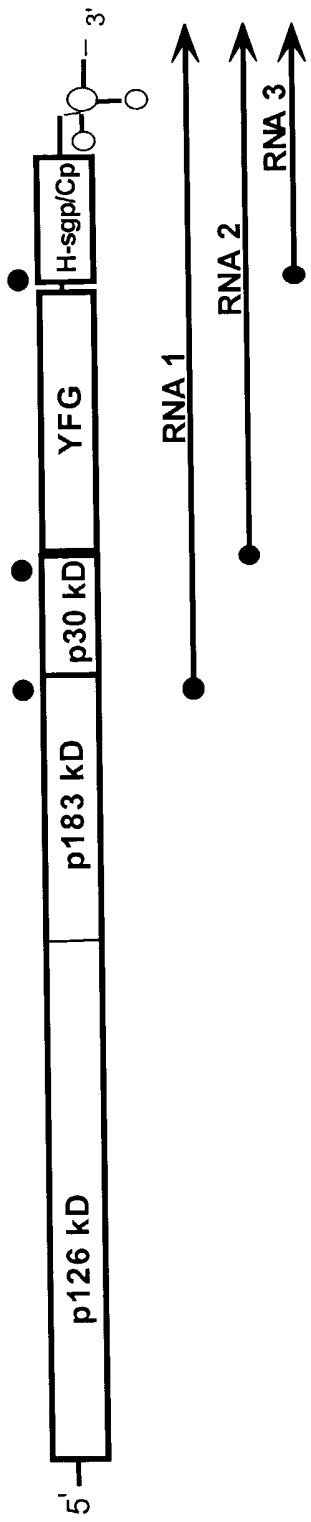


FIG. 2

Tobamovirus Vector for rGal-A Expression

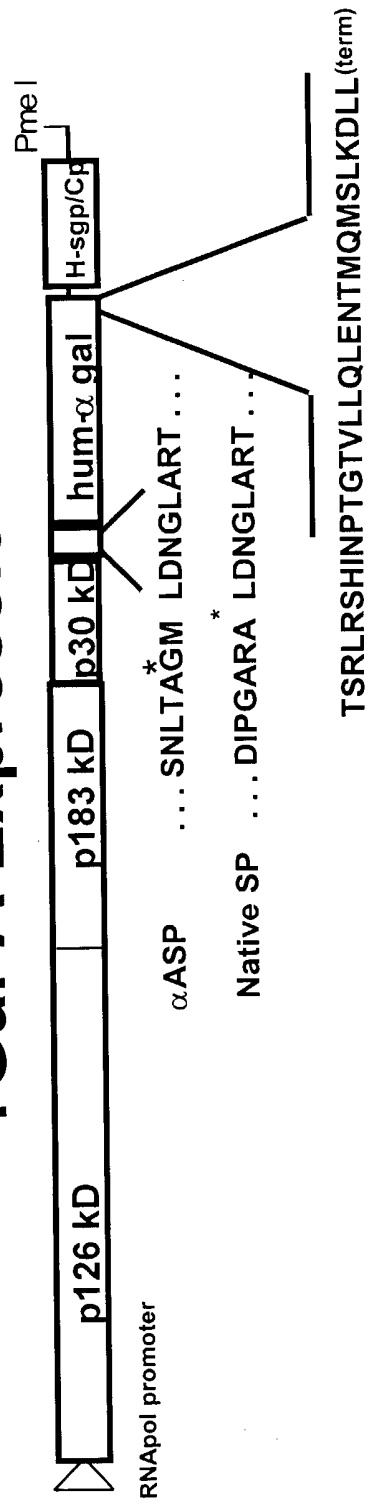


FIG. 3
Accumulation and Activity of WT rGal-A

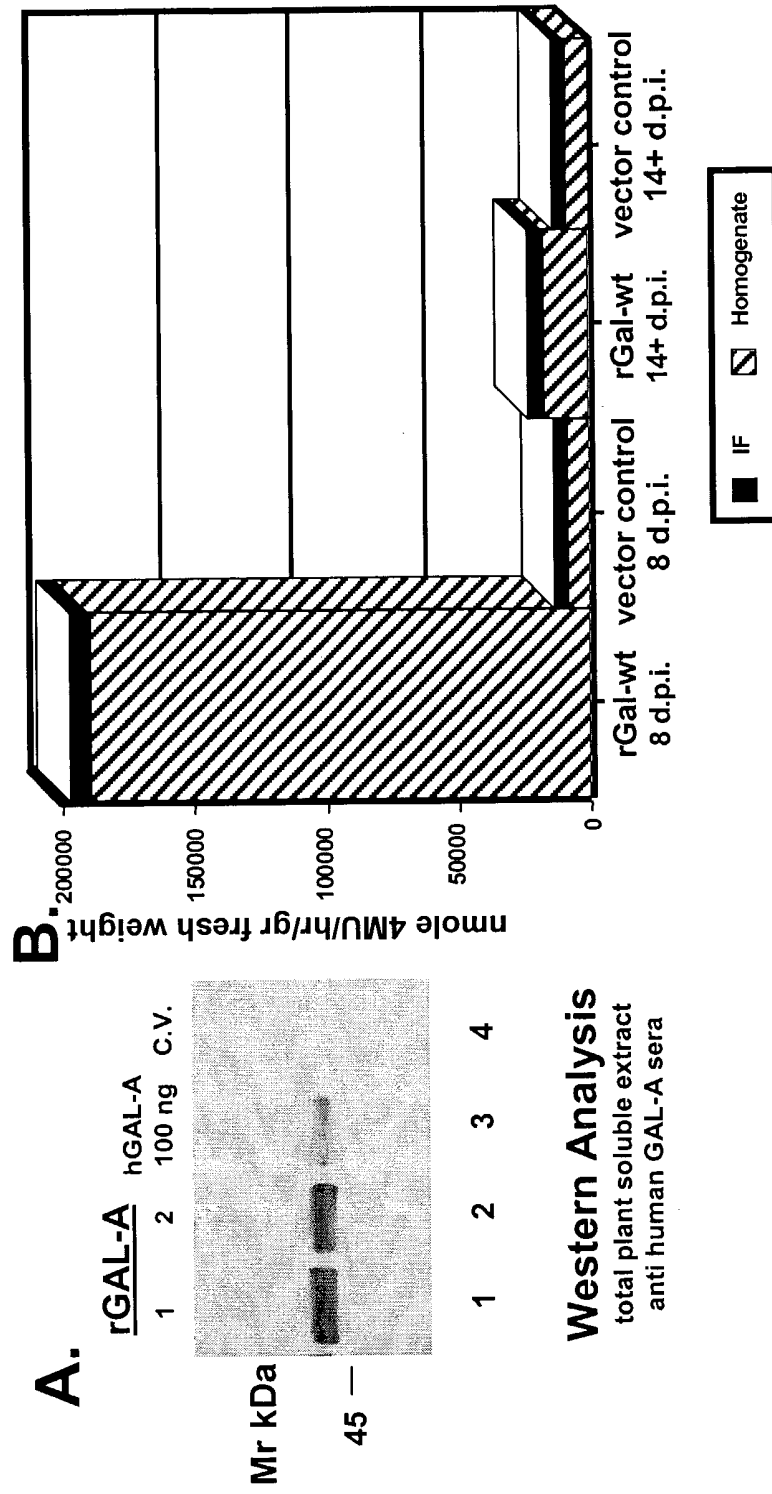


FIG. 4
Accumulation and Activity
of WT and ER-Targeted rGal-A

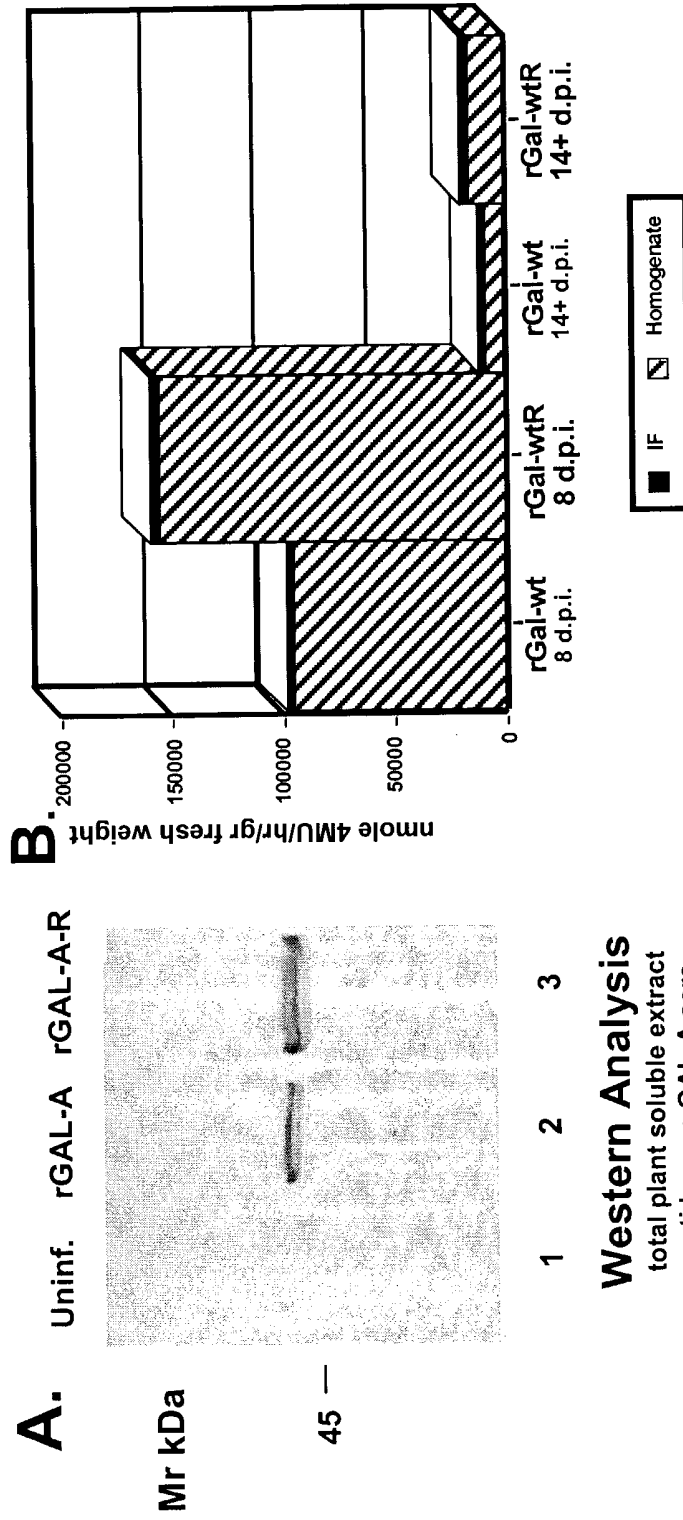


FIG. 5 **Carboxy-Modifications to rGal-A**

	-30	-20	-10
WT			[*] TSRLRSHINPTGTVLLQLENTMQMSLKDLL
WTR			TSRLRSHINPTGTVLLQLENTMQMSLKDLLSEKDEL
Δ4			TSRLRSHINPTGTVLLQLENTMQMSL
Δ4R			TSRLRSHINPTGTVLLQLENTMQMSLSEKDEL
Δ8			TSRLRSHINPTGTVLLQLENTM
Δ8R			TSRLRSHINPTGTVLLQLENTMSEKDEL
Δ12			TSRLRSHINPTGTVLLQL
Δ12R			TSRLRSHINPTGTVLLQLSEKDEL
Δ25			TSRLR
Δ25R			TSRLRSEKDEL

Control virus (GFP, AMP, IFN γ)

^{*} potential CTPP cleavage (Gene 58:177,1987).

FIG. 6
Western Blot Analysis of
Carboxy-modified rGal-A

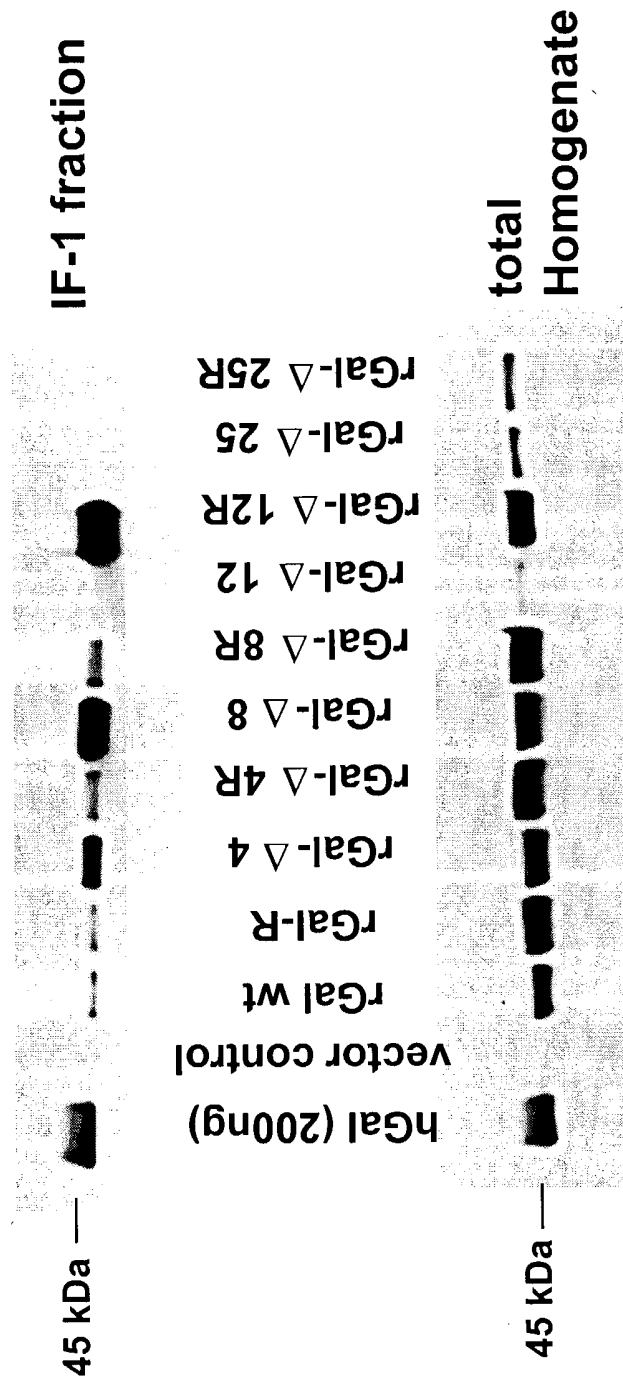
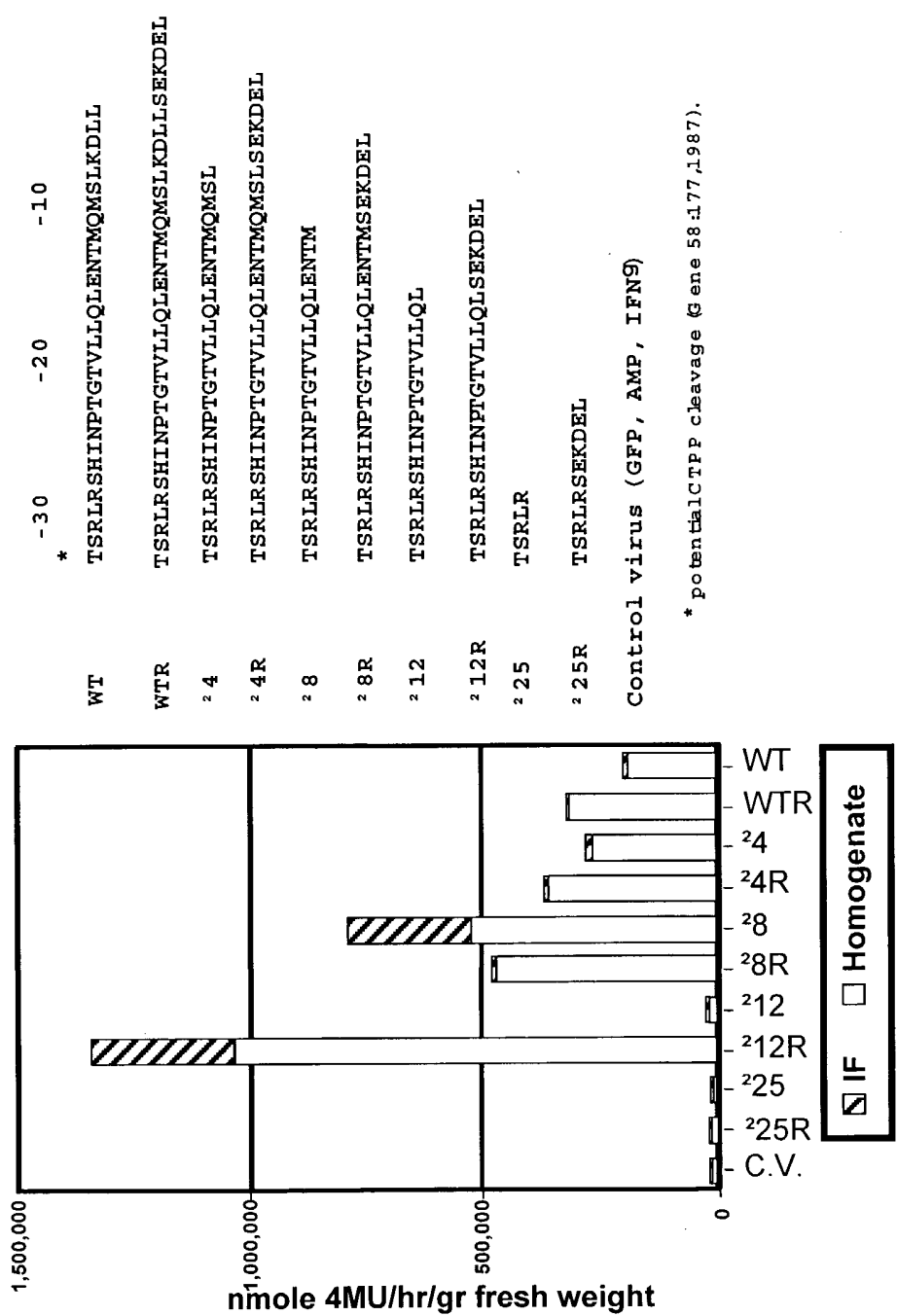


FIG. 7
Enzymatic Activity of Carboxy-Modified rGal-A



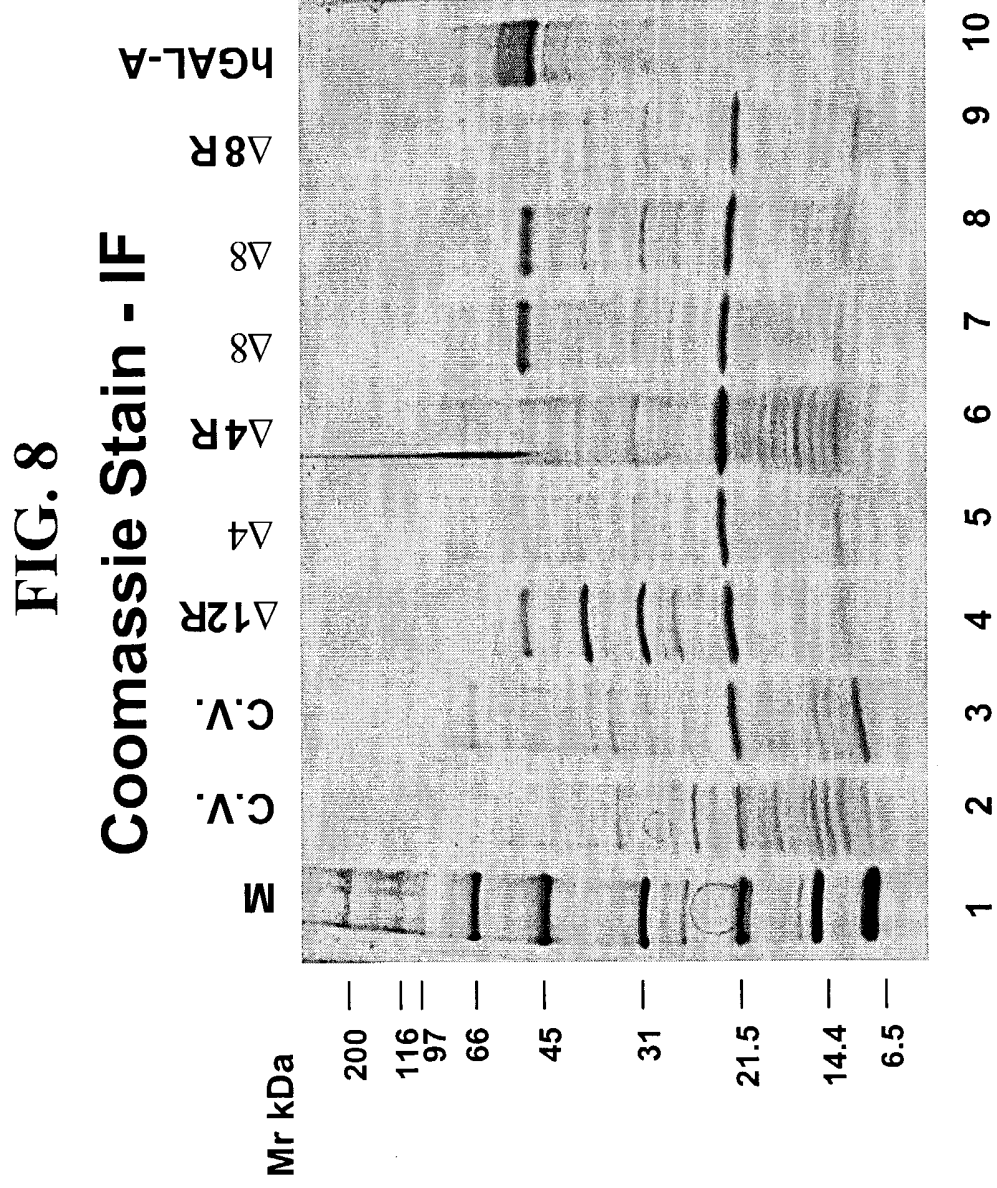
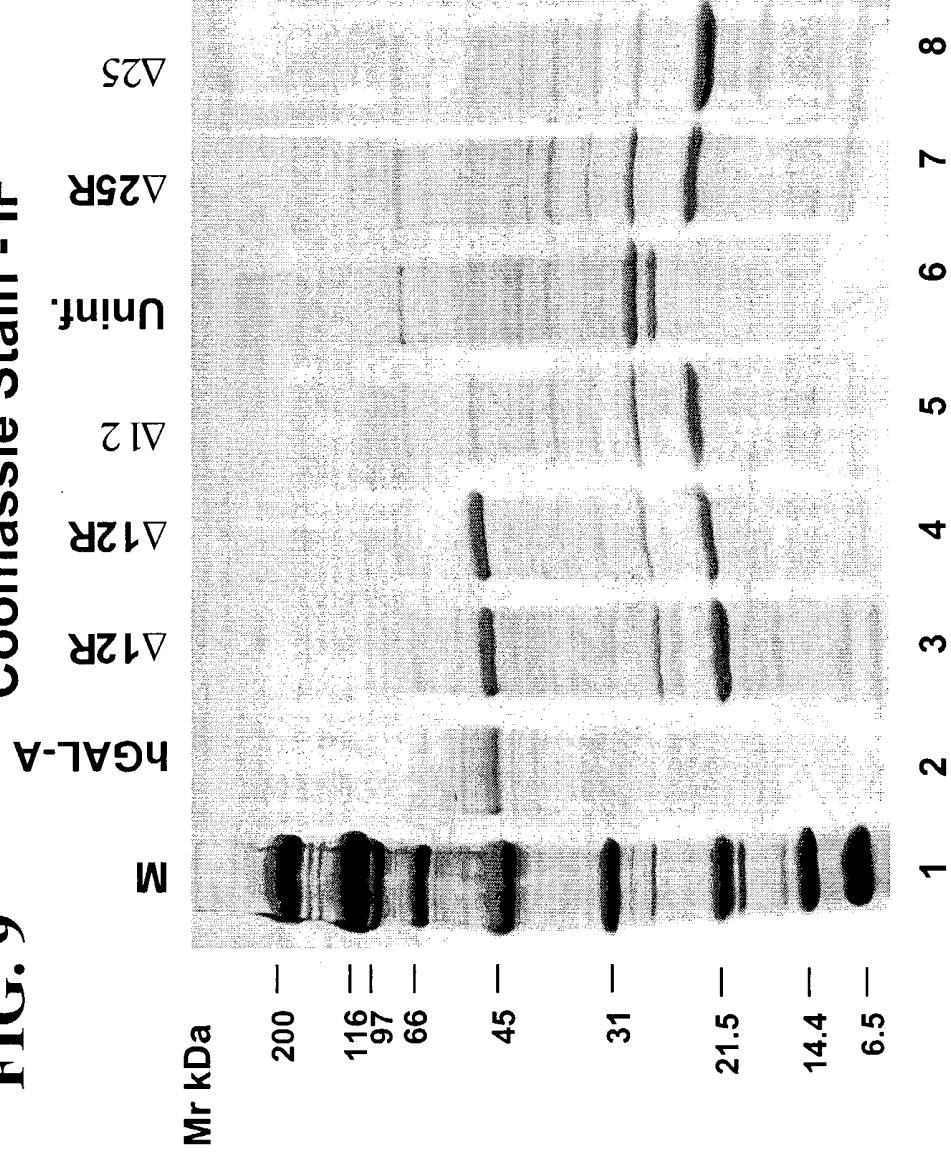


FIG. 9

Coomassie Stain - IF



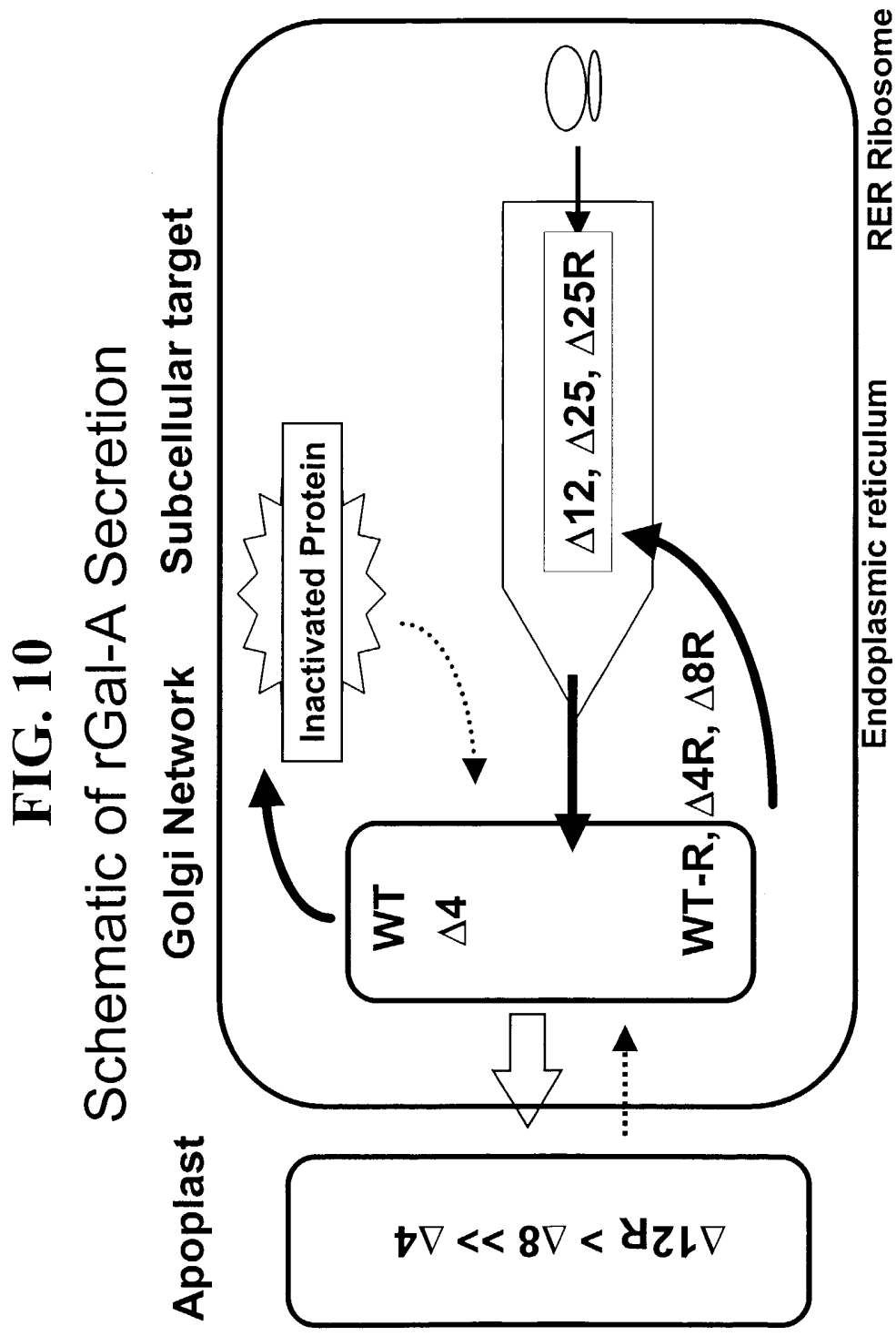


FIG. 11

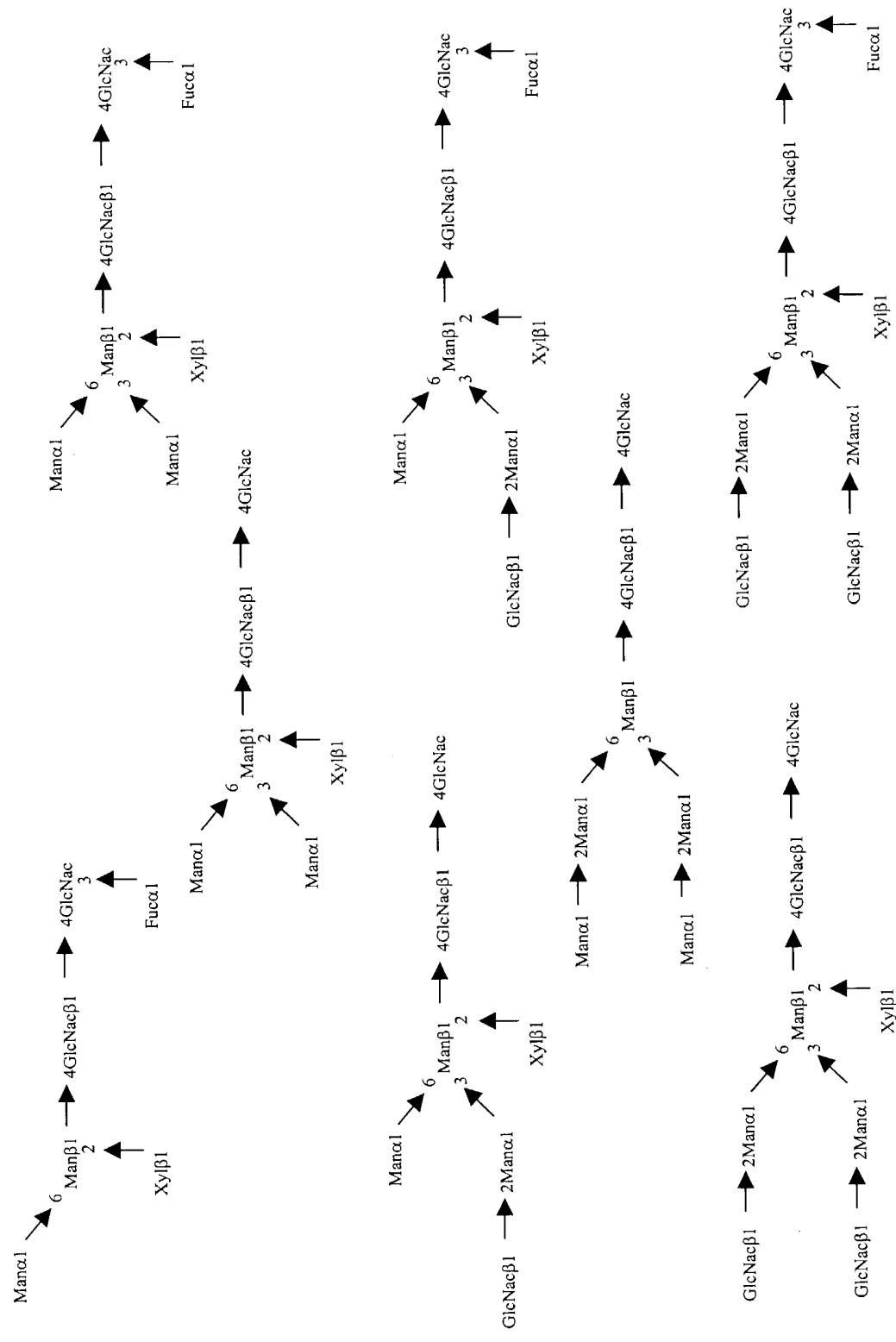


FIG. 12-1

GTATTTTACAACAATTACCAACAACAACAACAACAACAACTTACAATTACTATTTACAATTACAATGGCATAACACA
CAGACAGCTACCACATCAGCTTTGCTGGACACTGTCCGAGGAAACAACCTCCTTGGTCAATGATCTAGCAAAGCGTCGTCT
TTACGACACAGCGGTTGAAGAGTTTAAACGCTCGTGACCGCAGGCCCAAGGTGAACCTTTTCAAAGTAATAAGCGAGGAGC
AGACGCTTATTGCTACCCGGGCGTATCCAGAATTCAAATTACATTTTATAACACGCAAAATGCCGTGCATTCGCTTGCA
GGTGGATTGCGATCTTTAGAACTGGAATATCTGATGATGCAAAATCCCTACGGATCATTGACTTATGACATAGGCGGGAA
TTTTGCATCGCATCTGTTCAAGGACGAGCATATGTACACTGCTGTATGCCCAACCTGGACGTTCCGAGACATCATGGGC
ACGAAGGCCAGAAAGACAGATTGAACTATACCTTTCTAGGCTAGAGAGAGGGGGGAAACAGTCCCCAACTTCCAAAAG
GAAGCAITTTGACAGATACGCAGAAATTCCTGAAGACGCTGTCTGCACAATCTTCCAGACAATGCCACATCAGCCGAT
GCAGCAATCAGGCAGAGTGTATGCCATTGCGCTACACAGCATATATGACATACCAGCCGATGAGTTCCGGGCGGCACCTCT
TGAGGAAAAATGCCATACGTGCTATGCCGCTTCCACTTCTCTGAGAACCTGCTTCTTGAAGATTACATCGTCAATTTG
GACGAAATCAACGCGTGTTTTTCGCGCGATGGAGACAAGTTGACCTTTTCTTTTGCATCAGAGAGTACTCTTAATTATTG
TCATAGATTATTTAATATTCTTAAGTATGTGTGCAAACTTACTTCCCGGCTCTAATAGAGAGGTTTACATAGAGAGT
TTTGTAGTACCCAGAGTTAATACCTGGTTTTGTAAAGTTTTCTAGAATAGATACTTTTCTTTGTACAAAAGGTGTGGCCCAT
AAAAGTGTAGATAGTGAAGCTTTTATATCTGCAATGGAAGACGCATGGCATTACAAAAAGACTCTTGAATGTGCAACAG
CGAGAGAAATCCTCCTTGAAGATTCTATCATCAGTCAATTAAGTGTTCCTTCCAAAATGAGGGATATGGTCACTGATACCATTAT
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CATTAAAGGTTGTGACAGCGAGGTCGAATGGGATGTGGACAATCTTTGTGTAACCTTGTCTCATGACGTTTACCTGC
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GGCAGGCGACGCATTAGAGATCAGGGTGCTGATCTATATGTGACCTTCCACGACAGATTAGTGAAGTGTGCAAGGCTT
CTGTGGACATGCTGCGCTTGACATTAGGAAGAAGATGGAAGAAACGGAAGTGTGTAACCTTGTCTCATGACGTTTACCTGC
GTGTTAAGGGAGTCTGACAAATTCGATGTTGATGTTTTTCCAGATGTGCCAATCTTTGGAAGTTGACCCAAATGACGGC
AGCAAGGTTAATAGTTCGCTGCGTCTATGAGCAATGAGAGCGGCTGACTCTCACTTTGAACGACCTACTGAGGCGAATTTG
CGCTAGCTTTACAGGATCAAGAGAAGGCTTCAGAAGGTGCTTTGGTAGTTACCTCAAGAGAAGTTGAAGAACCGTCCATG
AAGGGTTCGATGGCCAGAGAGAGTTTACAATTAAGTGTCTTCTGCTGGAGATCATCCGAGTCTGCTCTATTCTAAGAACGA
GGAGATAGAGTCTTTAGAGCAGTTTCATATGGCAACGGCAGATTTCGTTAATTCGTAAGCAGATGAGCTCGATTGTGTACA
CGGTCGATTAAGTTTCAGCAAAATGAAAACTTTATCGATAGCCTGGTAGCATCACTATCTGCTGCGGTGTGCAATCTC
GTCAAGATCCTCAAAGATACAGCTGCTATTGACCTTGAAACCCGTCAAAGTTTGGAGTCTTGGATGTTGCATCTAGGAA
GTGGTTAATCAAACCAACGCCCAAGAGTGTGATGGGGTGTGTTGAAACCCACGCGAGGAAGTATCATGTGGCGCTTT
TGGAATATGATGAGCAGGGTGTGGTGACATGCGATGTTGGAGAAGAGTAGCTGTGAGCTCTGAGTCTGTTGTTTATTCC
GCATAGGCGAACTCAGAACTCTGCGCAGACTGCTTCGAAACGGAGAACCAGCATGTGATAGCGCAAGGTTGTTCTTGT
GGACGGAGTTCGGGGCTGTGGGAAACCAAGAAATCTTTCCAGGGTTAATTTTGTGTAAGATCTAATTTTAGTACCTG
GGAAGCAAGCCGCGGAAATGATCAGAAGACGTGCGAATTCCTCAGGAGATTATTGTGGCCACGAAGGACAACCTTAAACCC
GTTGATCTTTTCATGATGAATTTTGGGAAACGACACGCTGTGAGTTCAAGAGGTTATTCAATTGATGAAGGGTTGATGTT
GCATACTGGTTGTGTTAATTTCTTGTGCGATGTCTTGTGCGAAATTGCATATGTTTACGGAGACACACAGCAGATTTC
CATACATCAATAGAGTTTCAGGATTCCTGACCCCGCCCATTTTGCCAAATTTGGAAGTTGACGAGGTGGAGACACGCAGA
ACTACTCTCGTGTGTCAGCCGATGTACACATTATCTGAACAGGAGATATGAGGGCTTGTGATGAGCATTCTTCTCGGT
TAAAAAGTCTGTTTCGAGGAGATGGTCGGCGGAGCCGCGTGATCAATCCGATCTCAAAACCCCTGTCATGGCAAGATCC
TGACTTTTACCCAATCGGATAAAGAACTCTGCTTTCAAGAGGGTATTGATGTTTCACTGTGATGAAGTGCAGGCG
GAGACATACTCTGATGTTTCACTAGTTAGGTTAACCCTACACCAGTCTCCATCATTGACGAGACAGCCACATGTTTT
GGTCGATGTCAAGGCACACCTGTTGCTCAAGTACTACACTGTTGTTATGGATCCTTAGTTAGTATCATTAGAGATC
TAGAGAACTTAGCTCGTACTTGTAGATATGTAAGGTCGATGCGGAACACAATAGCAATTACAGATTGACTCGGTG
TTCAAAGGTTCCAATCTTTTGTGTCAGCGCCAAAGACTGGTGATATTTCTGATATGCAGTTTACTATGATAAGTGTCT
CCCAGGCAACAGCACCATGATGAATAATTTGATGCTGTTACCATGAGGTTGACTGACATTTTCAATGAATGTCAAAGATT
GCATATTGGATATGTCTAAGTCTGTTGCTGCGCCTAAGGATCAAATCAAACCACTAATACCTATGGTACGAACGGCGGCA
GAAATGCCACGCCAGACTGGACTATTGAAAAATTTAGTGGCGATGATTAAGGAACTTTAAGCACCAGGTTGTCTGG
CATCAITGATATTGAAAAATCTGCATCTTAGTTGTAGATAAGTTTTTGTAGTATTATTGCTTAAAGAAAAAGAAAAAC
CAAATAAAAAATGTTTTCTTGTTCAGTAGAGAGTCTCTCAATAGATGGTTAGAAAAGCAGGAACAGGTAACAATAGGCCAG
CTCGCAGATTTGATTTGTAGATTGCCAGCAGTTGATCAGTACAGACATGATTAAGCACAACCCAAGCAAAAAAT
GGACACTTCAATCCAAACGGAGTACCCGCTTTGCGAGCAGTTGTGTACCATTTCAAAAAAGATCAATGCAATATTGGCC
CGTTGTTTAGTGAGCTTACTAGGCAATTACTGGACAGTGTGATTCGAGCAGATTTTGTGTTTTTCAAGAAAGACACCA
GCGCAGATTGAGGATTTCTTCCGAGATCTCGACAGTCTGTCGCGATGATGTCTGGAGCTGGATATATCAAAATACGA

FIG. 12-2

CAAATCTCAGAATGAATTCCTGTGTCAGTAGAATACGAGATCTGGCGAAGATTGGGTTTGAAGACTTCTTGGGAGAAG
TTTGAAACAAGGGCATAGAAAGACCACCCTCAAGGATTATACCGCAGGTATAAAACTTGCATCTGGTATCAAAGAAAG
AGCGGGGACGTCACGACGTTTCAATTGGAAACACTGTGATCATGTGTCATGTTTGGCCTCGATGCTTCCGATGGAGAAAAT
AATCAAAGGAGCCTTTTGGCGTGACGATAGTCTGCTGTACTTTCCAAAGGGTTGTGAGTTTCCGGATGTGCAACACTCCG
CGAATCTTATGTGGAATTTTGAAGCAAACTGTTTAAAAAACAGTATGGATACTTTTGGCGAAGATATGTAATACATCAC
GACAGAGGATGCATTGTGTATTACGATCCCCTAAAGTTGATCTCGAAACTTGGTGCTAAACACATCAAGGATTGGGAACA
CTTGGAGGAGTTTGAAGGTCTCTTTGTGATGTTGCTGTTTCGTTGAACAATTGTGCGTATTACACACAGTTGGACGACG
CTGTATGGGAGGTTTATAAGACCGCCCTCCAGGTTGCTTTGTTTATAAAAGTCTGGTGAAGTATTTGTCTGATAAAGTT
CTTTTGAAGTTTGTATATAGATGGCTCTAGTTGTTAAAGGAAAAGTGAATATCAATGAGTTTATCGACCTGACAAAAA
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AATGAGTCATTGTGAGAGGTGAACCTTCTTAAAGGAGTTAAGCTTATTGATAGTGGATACGCTCTGTTTAGCCGGTTTGGT
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TATGAGGTGTGTAACACCATGGTGAACAAACACTTCTTGTCCCTTTCGTTCTCATCGTCTCTTGGCCTCTCTCCCA
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AACCTTGACTGCCAGGAAGAGCCAGATTCTGCATCAGTGAGAAGCTCTTATGGAGATGGCAGAGCTCATGGTCTCAGA
AGGCTGGAAGGATGTCAGGTTATGAGTACCTCTGCAITGATGACTGTTGGATGGCTCCCCAAAGAGATTGAGAAGGAGAC
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TGCTGACTGGGAGTAGATCTGCTAAAAATTGATGGTTGTTACTGTGACAGTTTGGAAAATTGGCAGATGGTTATAAGC
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CAATCAGGACCCCTTGGGCAAGCAAGGTTACAGCTTAGACAGGGAGACAACTTGAAGTGTGGGAACGACCTCTCTCAG
GCTTAGCCTGGGCTGTAGCTATGATAAACCGGAGGAGATTGGTGGACCTCGCTCTTATACCATCGCAGTTGCTTCCCTG
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AGGCTTAAACCAAAAAGTTTGTAGAACTTGAAGAAGGTTGATAAATTTGATTGAAGATGAAGCCGAGAGCTCGGTGCG
GGATTCTGATTCTGATTAAATATGTCTTACTCAATCACTTCTCCATCGCAATTTGTGTTTGTGTCATCTGTATGGGCTGA
CCCTATAGAAATGTTAAACGTTTGTACAAATTCGTTAGGTAACAGTTTCAAACACAGCAAGCAAGAACTACTGTTCAAC
AGCAGTTACAGGAGGTGTGGAACCTTTCCCTCAGAGCACCGTCAGATTTCTGGCGATGTTTATAAGGTGTACAGGTAC
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GCAGAGTCCGACACAGCTGAAACGTTAGATGCTACCCGAGGGTAGACGACGCTACGGTTGCAATTCCGTCTGCTATAA
ATAATTTAGTTAATGAAGTGTAGAGGTTAGTGGACTGTACAATCAGAACTACTTTGAAAGTATGCTGCGGTTGGTCTGG
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ACGTACAGTGTTTTCCCTCCACTTAAATCGAAGGGTAGTGTCTTGGAGCGCGCGGAGTAAACATATATGTTTATATAT
GTCCGTAGGCACGTAAAAAAGCGAGGGATTGCAATTTCCCGGAACCCCGGTTGGGCGCCAGGTACCAATTCTTGAAG
ACGAAAGGGCTCGTGATACGCTTATTTTATAGGTTAATGTGATGATAATAATGGTTTCTTAGACGTACGGTGGCACTT
TTCCGGGAAATGTGCGCGGAACCCCTATTTGTTTATTTTCTAAATACATTCAAATATGTATCCGCTCATGAGACAATAA
CCTGATAAAATGCTTCAATAATATTGAAAAAGGAAGAGTATGAGTATTAACATTTCCGTGTGCGCCTTATTCCTTTT
TGCGGCATTTTGCCTTCTGTTTGTGCTACCCAGAACGCTGGTGAAGTAAAAGATGCTGAAGATCAGTTGGGTGCAC
GAGTGGGTTACATCGAAGTGGATCTCAACAGCGGTAAGATCCTTGAGAGTTTTCGCCCCGAAGACGTTTCCCAATGATG
AGCACTTTTAAAGTTCTGCTATGTGGCGCGGTATTATCCCGTGTGACGCGGGCAAGAGCAACTCGGTGCGCGCATACA
CTATTCTCAGAATGACTTGGTTGAGTACTACACAGTACAGAAAAGCATCTTACGGATGGCATGACAGTAAGAGAATTAT

FIG. 12-3

GCAGTGTGCCATAACCATGAGTGATAAACTGCGGCCAACTTACTTCTGACAACGATCGGAGGACCGAAGGAGCTAACC
GCTTTTTCGACAAACATGGGGGATCATGTAACCTCGCCTTGATCGTTGGGAACCGGAGCTGAATGAAGCCATACCAAACGA
CGAGCGTGACACCACGATGCCTGCAGCAATGGCAACAACGTTGCGCAAACCTATTAACTGGCGAACTACTTACTCTAGCTT
CCCGGCAACAATTAATAGACTGGATGGAGGCGGATAAAGTTGCAGGACCCTTCTGCGCTCGGCCCTTCGGCTGGCTGG
TTTATTGCTGATAAATCTGGAGCCGGTGAGCGTGGGTCTCGCGGTATCATGTCAGCACTGGGGCCAGATGGTAAGCCCTC
CCGTATCGTAGTTATCTACACGACGGGGAGTCAGGCAACTATGGATGAACGAAATAGACAGATCGCTGAGATAGGTGCCT
CACTGATTAAGCATTTGTAACGTGTAGACCAAGTTTACTCATATATACTTTAGATTGATTAAAACTTCATTTTAAATTT
AAAAGGATCTAGGTGAAGATCCTTTTGTATAATCTCATGACCAAAATCCCTTAACGTGAGTTTTCTGTTCCACTGAGCGTC
AGACCCCGTAGAAAAGATCAAAGGATCTTCTTGAGATCCTTTTCTGCGGTAACTCTGCTGCTTGCAAAACAAAAAAC
CACCGCTACCAGCGGTGGTTTGTGTCGGATCAAGAGCTACCAACTCTTTTCCGAAGGTAACCTGGCTTCAGCAGAGCG
CAGATACCAATACTGTCTTCTAGTGTAGCCGTAGTTAGGCCACCCTTCAAGAACTCTGTAGCACCGCCTACATACCT
CGCTCTGCTAATCCTGTTACCAGTGGCTGCTGCCAGTGGCGATAAGTCTGTCTTACCAGGTGGACTCAAGACGATAGT
TACCGGATAAGGCCAGCGGTGCGGCTGAACGGGGGGTTCGTGCACACAGCCAGCTTGGAGCGAACGACCTACACCGAA
CTGAGATACCTACAGCGTGAGCTATGAGAAAGCGCCACGCTTCCCGAAGGGAGAAAGCGGACAGGTATCCGGTAAGCGG
CAGGTCGGAACAGGAGAGCGCACGAGGGAGCTTCCAGGGGGAACGCGCTGGTATCTTTATAGTCTGTGCGGGTTTCGCC
ACCTCTGACTTGAGCGTCGATTTTGTGATGCTCGTCAGGGGGCGGAGCCTATGGAAAAACGCCAGCAACGCGCCTTT
TTACGGTTTCTGGCCTTTTGTGCTGGCCTTTTGTCTACATGTTCTTTCTGCGTTATCCCTGATTCTGTGGATAACCGTAT
TACCGCCTTTGAGTGAGCTGATACCGCTCGCCGACGCCAACGACCGAGCGCAGCGAGTCACTGAGCGAGGAAGCGGAAG
AGCGCTGTAGCGGTATTTCTCCTTACGCATCTGTGCGGTATTTACACCGCATATGGTGCACTCTCAGTACAACTCTGC
TCTGATGCCGCATAGTTAAGCCAGTATACACTCCGCTATCGCTACGTGACTGGGTATGGCTGCGCCCCGACACCGCCCA
ACACCCGCTGACGCGCCCTGACGGGCTTGTCTGCTCCCGCATCCGCTTACAGACAAGCTGTGACCGTCTCCGGGAGCTG
CATGTGTGAGAGGTTTTCACCGTCATACCGAAACGCGGAGGCAGCTCGGTAAAGCTCATCAGCGTGGTCTGTAAGCG
ATTCACAGATGTCTGCCTGTTTCATCCGCTCCAGCTCGTTGAGTTTCTCCAGAAGCGTTAATGTCTGGCTTCTGATAAAG
CGGGCCATGTTAAGGGCGGTTTTTCTGTGTTGGTCACTTGATGCCTCCGTGTAAGGGGAATTTCTGTTTACGGGGTA
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ATGTAGGTGTTCCACAGGGTAGCCAGCAGCATCTGCGATGCAGATCCGGAACATAATGGTGACAGGGCGCTGACTTCCGC
GTTTCCAGACTTTACGAAACACGGAACCGAAGACCATTCATGTTGTTGCTCAGGTGCGAGACGTTTTGCGAGCAGCATC
GCTTACAGTTCGCTCGCTATCGGTGATTCATTCTGCTAACCAGTAAGGCAACCCCGCAGCCTAGCCGGTCTCTCAACG
ACAGGAGCAGCATCATGCGACCCGTGGCCAGGACCCAAACGCTGCCCAGATGCGCCGCTGCGGCTGCTGGAGATGGCG
GACCGATGGATATGTTCTGCCAAGGGTTGGTTTGGCGATTACAGTTCTCCGCAAGAATTGATTGGCTCCAATTCCTGG
AGTGGTGAATCCGTTAGCGAGGTGCCCGCGGCTTCCATTTCAGGTGAGGTGGCCCGGCTCCATGCACCGGACGCAACGC
GGGGAGGCAGACAAGGTATAGGGCGGCGCTACAATCCATGCCAACCCGTTCCATGTGCTGCGCGAGGCGGCATAAATCG
CCGTGACGATCAGCGGTCCAGTGATCGAAGTTAGGCTGGTAAGAGCCGCGAGCGATCCTTGAAGCTGTCCCTGATGGTCTG
TCATCTACCTGCCTGGACAGCATGGCCTGCAACGCGGCATCCCGATGCCGCGGAAGCGAGAAGAATCATAATGGGGAA
GGCCATCCAGCCTCGCTCGCAACGCCAGCAAGACGTAGCCAGCGCGTGGCCGCCATGCCGGCGATAATGGCCTGCT
TCTCGCGAAACGTTTGGTGGCGGGACCACTGACGAAGGCTTGAGCGAGGGCGTGCAAGATTCCGAATACCGCAAGCGAC
AGGCCGATCATCTGCTCGCGTCCAGCGAAAGCGGCTTCCGCCGAAATGACCCAGAGCGCTGCCGGCACCTGTCTACGAG
TTGCATGATAAAGAAGACAGTCATAAGTGGCGGACGATAGTCATGCCCCGCGCCACCGGAAGGAGCTGACTGGGTTGA
AGGCTCTCAAGGGCATCGGTGAGATTTAGGTGACACTATA

FIG. 13-1

GTATTTTACAACAATTACCAACAACAACAAACAACAGACAACATTACAATTACTATTTACAATTACAATGGCATAACACA
CAGACAGCTACACATCAGCTTTGCTGGACACTGTCCGAGGAAACAACCTCTTGGTCAATGATCTAGCAAAGCGTCGTCT
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GCAGCAATCAGGACAGAGTGTATGCCATGCGCTACACAGCATATATGACATACCAGCCGATGAGTTGCGGGCGGCACTCT
TGAGGAAAAATGTCATACGTGCTATGCCGCTTCCACTTCTCCGAGAACCCTGCTTCTTGAAGATTGATGCGTCAATTG
GACGAAATCAACGCGTGTTTTTTCGCGCATGGAGACAAGTTGACCTTTTCTTTGTCATCAGAGAGTACTCTTAATTACTG
TCATAGTTATTCTAATATTCTTAAGTATGTGTGCAAACTTACTTCCCGCTCTAATAGAGAGGTTTACATGAAGGAGT
TTTTAGTCAACAGAGTTAATACCTGGTTTGTAAAGTTTCTAGAATAGATACTTTCTTTTGTACAAAGGTGTGGCCCAT
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TCGACATTTCTTTGGAGACTAGTAAGAGGACGCGCAAGGAAGTCTTAGTGTCCAAGGATTTGCTGTTCAAGTGTCTTAAC
CACATTGCAACATACCAGGCGAAAGCTCTTACATACGCAATGTTTGTCTTCCGTCGAATCGATTCGATCGAGGGTAAAT
CATTAACGCTGTGACAGCGAGGTCCGAATGGGATGTGGACAAATCTTGTGTACAATCCTTGTCCATGACGTTTTACCTGC
ATACTAAGCTTGGCGTTCTAAAGGATGACTTACTGATTAGCAAGTTAGTCTCGGTTGCAAAACGGTGTGCCAGCATGTG
TGGGATGAGATTTGCTGCGCTTGGGAACGCATTCCCTCCGTGAAAGAGAGGCTCTTGAACAGGAACTTATCAGAGT
GGCAGGCGACGCATTAGAGATCAGGGTGCCTGATCTATATGTGACCTTCCACGACAGATTAGTGACTGAGTACAAGGCCCT
CTGTGGACATGCTGCGCTTGACATTAGGAAGAAGATGGAAGAAACGGAAGTGATGTACAATGCACCTTTCAGAATATCTG
GTGTTAAGGGAGTCTGACAAATTCGATGTTGATGTTTTTCCAGATGTGCCAATCTTTGGAAGTTGACCAATGACCGC
AGCGAAGGTTATAGTCGCGCTCATGAGCAATGAGAGCGGTCTGACTCTCACATTTGAACGACCTACTGAGGCGAATGTTG
CGCTAGCTTTACAGGATCAAGAGAAGGCTTCAGAAGGTGCATTGGTAGTTACCTCAAGAGAAGTTGAAGAACCCTCCATG
AAGGTTTCGATGGCCAGAGGAGAGTTACAATTAGCTGGTCTTGTCTGGAGATCATCCGGAATCGTCTATTCTAAGAACGA
GGAGATAGAGTCTTTAGAGCAGTTTCATATGGCGACGCGAGATTCTGTTAATTCGTAAGCAGATGAGCTCGATTGTGTACA
CGGGTCCGATTAAAGTTACGCAATGAAAACTTTATCGATAGCCTGGTAGCATCACTATCTGCTGCGGTGTGCAATCTC
GTCAAGATCCTCAAAGATACAGCTGCTATTGACCTTGAAACCCGTCAAAGTTTGGAGTCTTGGATGTTGCATCTAGGAA
GTGGTTAATCAAACCAACGGCCAGAGTCATGATGGGGTGTGTTGAAACCCACGCGAGGGAGTATCATGTGGCGCTTT
TGGAATATGATGAGCAGGTTGTTGACATGCGATGATTGGAGAAGAGTAGCTGTTAGCTCTGAGTCTGTGTTTATTC
GACATGGCGAAACTCAGAACTCTGCGCAGACTGCTTCGAAACGGAGAACCGCATGTGAGTAGCGCAAAGGTTGTTCTTGT
GGACGGAGTTCCGGCTGTGGAAAAACCAAGAAATCTTTCCAGGTTAATTTTGTATGAAGATCTAATTTTAGTACCTG
GGAAGCAAGCCGCGAAATGATCAGAAGACGTGCGAATTCCTCAGGGATTATGTGGCCACGAAGGACAACGTTAAAACC
GTTGATTCTTCATGATGAATTTTGGGAAAAGCACACGCTGTGAGTTCAAGAGGTTATTTCATTGATGAAGGTTGATGTT
GCATACTGGTGTGTAAATTTTCTGTGGCGATGTCAATTGTGCGAAATGTCATATGTTTACGGAGACACACAGCAGATTC
CATACATCAATAGAGTTTTCAGGATTCCTGACCCCGCCCATTTTGCCAAATTGGAAGTTGACGAGGTGGAGACACGCGAGA
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TAAAAAGTCTGTTTCCAGGAGATGGTCCGCGAGCCCGGTGATCAATCCGATCTCAAAACCTTGCATGGCAAGATCC
TGACTTTTACCCAATCCGATAAAGAAGCTCTGCTTTCAAGAGGGTATTAGATGTTTCACTGTGATGAAGTGAAGGC
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GGTCGATTTGTCAAGGCACACCTGTTGCTCAAGTACTACACTGTTGTTATGGATCCTTTAGTTAGTATCATTAGAGATC
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GCATATTGGATATGTCTAAGTCTGTTGCTGACCTAAGGATCAAATCAAACCACTAATACCTATGGTACGAACCGCGGCA
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CAAATAAAAAATGTTTCTTGTTCAGTAGAGAGTCTCTCAATAGATGGTTAGAAAAGCAGGAACAGGTAACAATAGGCCAG
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GGACACTTCAATCAAACGGAGTACCCGCTTTGCGAGCAGATTGTGTACCATTCAAAAAGATCAATGCAATATTTCGGCC
CGTTGTTTAGTGAGCTTACTAGGCAATTACTGGACAGTTGATTCGAGCAGATTTTGTGTTTTTCAAGAAAGACACCA
GCGCAGATTGAGGATTTCTTCGAGATCTCGACAGTCATGTGCCGATGGATGCTTGGAGCTGGATATCAAAATACGA

FIG. 13-2

CAAACTCTCAGAATGAATTCCACTGTGCAGTAGAATACGAGATCTGGCGAAGATTGGGTTTCGAAGACTTCTTGGGAGAAG
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